

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims

1. **(Currently Amended)** A method of promoting highly efficient antigen presentation in a mammal comprising:
 - a) exposing ex vivo or in vivo dendritic cells from said mammal to either of the following:
 - i) a conjugate comprising a preselected antigen covalently bound to an antibody which binds to human DEC-205 or mouse DEC-205; or
 - ii) a recombinant ~~anti-DEC-205~~ antibody which binds to human DEC-205 or mouse DEC-205, wherein said antibody has been genetically modified to contain at least one preselected antigen on at least one preselected site on said antibody molecule; and
 - b) promoting maturation of said dendritic cells ex vivo or in vivo by combining the antigen/anti-DEC-205 complex of either of i) or ii) of step a) with a dendritic cell maturation factor;wherein the combination of steps a) and b) results in highly efficient antigen presentation in said mammal.
2. **(Currently Amended)** A method of promoting highly efficient antigen presentation in a mammal comprising administering a recombinant ~~anti-DEC-205~~ antibody which binds to human DEC-205 or mouse DEC-205 to said mammal, wherein said antibody has been genetically modified to contain at least one preselected antigen and at least one dendritic cell maturation factor, each on at least one preselected site on said antibody, and wherein said administering results in delivery of said antigen to said dendritic cell, maturation of said dendritic cell and promotion of highly efficient antigen presentation.

3. **(Original)** The method of either of claims 1 or 2, wherein said preselected site on said antibody is on the heavy or light chain of said antibody, or on fragments thereof.
4. **(Original)** The method of either of claims 1 or 2, wherein said method results in induction of a long term cellular and/or humoral immune response in said mammal.
5. **(Original)** The method of claim 4, wherein said method results in said antigen being about 500 times more effective in inducing a long-lasting T cell response and in expanding antigen-specific CD4+ and CD8+ T cells in the mammal, as compared to an antigen administered without an anti-DEC-205 antibody and without a dendritic cell maturation factor.
6. **(Original)** The method of claim 4, wherein said method increases the efficiency with which the antigen initiates CD4+ and CD8+ immunity from the polyclonal naive T cell repertoire in vivo.
7. **(Original)** The method of either of claims 1 or 2, wherein said anti-DEC-205 antibody is a polyclonal or a monoclonal antibody.
8. **(Original)** The method of claim 7, wherein said antibody is selected from the group consisting of a human antibody, a murine antibody that reacts with human DEC-205 protein, a humanized antibody, and a human-chimerized antibody.
9. **(Original)** The method of claim 8, wherein said antibody is a monovalent or single chain antibody.
10. **(Original)** The method of claim 5, wherein the T cell response is selected from the group consisting of a cytolytic T cell response, a helper T cell response and a memory T cell response.

11. **(Original)** The method of either of claims 1 or 2, wherein said method results in priming of CD8+ T cells specific for the preselected antigen, and wherein said preselected antigen is a non-replicating and/or subunit vaccine.

12. **(Original)** The method of claim 11, wherein said vaccine is composed of antigens selected from the group consisting of a tumor vaccine, a viral vaccine, a bacterial vaccine and vaccines for other pathogenic organisms for which a long lasting immune response is necessary to provide long term protection from infection or disease.

13. **(Canceled)**

14. **(Original)** The method of claim 11, wherein said vaccine is administered as a single dose.

15. **(Original)** The method of claim 14, wherein said single dose is sufficient to elicit a long lasting immune response.

16. **(Original)** The method of claim 14, wherein said vaccine is effective when administered without adjuvant.

17. **(Original)** The method of claim 14, wherein said single dose of vaccine, when administered at levels of about 10 to 1000 fold lower than the level of a vaccine administered without an anti-DEC 205 antibody and without a dendritic cell maturation factor but with an adjuvant, results in highly efficient antigen presentation and induction of long lasting immune responses.

18. **(Original)** The method of claim 14, wherein said vaccine is administered at a single dose of about 1 mg to about 10 mg.

19. **(Original)** The method of claim 14, wherein said vaccine is administered at a single dose of about 1 µg to about 10 µg.

20. **(Original)** The method of claim 14, wherein said vaccine is administered at a single dose of about 10 ng to about 100 ng.

21. **(Previously Presented)** The method of claim 11, wherein said vaccine is administered subcutaneously, intramuscularly, intravenously, intranasally, orally, mucosally, buccally or sublingually.

22. **(Original)** The method of claim 17, wherein said immune response is a cellular or humoral immune response.

23. **(Original)** The method of claim 22, wherein said cellular immune response is selected from the group consisting of a cytolytic T cell response, a helper T cell response and a memory T cell response.

24. **(Currently Amended)** A method for increasing the persistence of MHC class I: antigen complexes in a mammal comprising:

a) exposing ex vivo or in vivo dendritic cells from said mammal to either of the following:

- i) a conjugate comprising a preselected antigen covalently bound to an antibody which binds to human DEC-205 or mouse DEC-205 ~~to DEC-205~~; or
- ii) a recombinant antibody which binds to human DEC-205 or mouse DEC-205 ~~anti-DEC-205 antibody~~, wherein said antibody has been genetically modified to contain at least one preselected antigen on at least one preselected site on said antibody molecule; and

b) promoting maturation of said dendritic cells ex vivo or in vivo by combining the antigen/anti-DEC-205 complex of either of i) or ii) of step a) with a dendritic cell maturation factor;

wherein the combination of steps a) and b) results in persistent presentation of antigen in the context of MHC class I antigens such that persistence of MHC class I: antigen complexes in said mammal results in induction of a long lasting T cell response specific for said antigen; and wherein such persistent presentation of antigen is analogous to a systemic infection as evidenced by presentation of antigen in most lymphoid tissue.

25. **(Original)** The method of claim 24 wherein said MHC class I: antigen complexes persist in vivo in multiple lymphoid sites from about 15 to about 30 days.

26. **(Original)** The method of either of claims 1 or 2, wherein said method results in induction of mucosal immunity specific for said predetermined antigen.

27. **(Original)** The method of claim 12, wherein treatment of a mammal with said tumor vaccine results in tumor regression in vivo.

28. **(Original)** The method of claim 27, wherein said tumor regression is associated with an increase in a tumor specific CD8+ cytolytic T cell response.

29-54. **(Canceled)**

55. **(Previously Presented)** The method of claim 24, wherein the method results in priming of CD8+ T cells specific for the antigen, wherein the antigen is a non-replicating antigen or a subunit vaccine.

56. **(Previously Presented)** The method of claim 55, wherein the non-replicating antigen is selected from the group consisting of a bacterium, a virus, a tumor cell and any other pathogenic organism for which long term immunity and protection from disease is desired.

57-59. **(Canceled)**